Dieselgeek Panzer Plate Install Instructions For The Audi TT (2000 and 2001)

Parts and Packing List

1. One (1) aluminum MK4 Panzer skid plate (TT Version - FIGURE 1 -MK4 PANZER SKID PLATE)

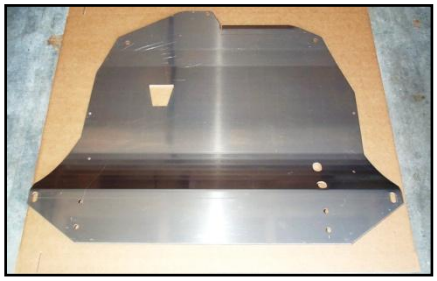

Figure 1 -MK4 Panzer Skid Plate

2. One (1) custom aluminum mounting bracket with attached 3/8-16 bolts and shoulder nuts (FIGURE 2 - ALUMINUM MOUNTING BRACKET)

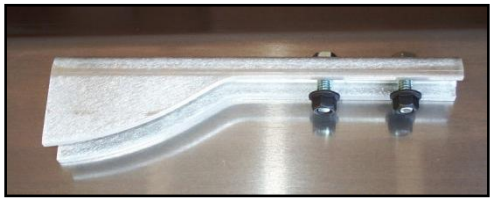

Figure 2 - Aluminum Mounting Bracket

3. Two (2) stainless steel u-bolt style exhaust clamps with 3/8-16 shoulder nuts (FIGURE 3 -EXHAUST CLAMPS)

Figure 3 -Exhaust Clamps

4. Two (2) 3/8 inch stud retainer discs (FIGURE 4 - STUD RETAINER DISCS)

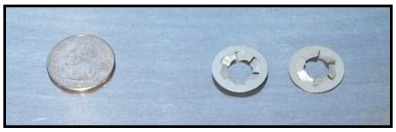

Figure 4 - Stud Retainer Discs

5. Four (4) 10mm or 3/8 inch large fender washer (FIGURE 6 - FENDER WASHER)

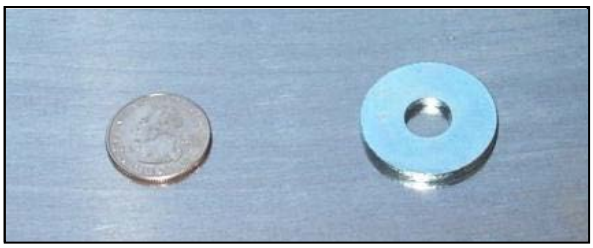

Figure 5 - Fender Washer

6. Three (3) silver 10mm x 30mm zinc plated bolts with 1.50 thread pitch (FIGURE 7 –ZINC PLATED BOLTS)

Figure 6 – Zinc Plated Bolts

7. One (1) factory Audi silver colored rivnut (part number N 908 106 02) (FIGURE 8 – SILVER COLORED RIVNUT)

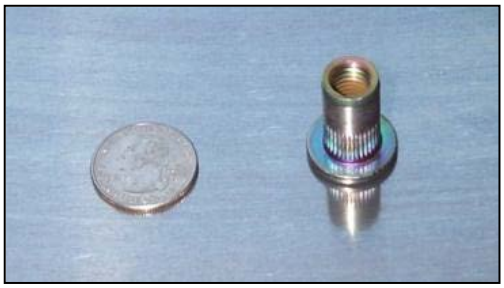

Figure 7 – Silver Colored Rivnut

Tools Required

1. Safety goggles
2. 3/8 drive socket wrench
3. 5/8 or 16mm socket
4. 9/16 or 14mm deep socket
5. 10mm socket
6. 3 inch and 12 inch extension bar for socket wrench
7. Torque wrench for accurate rivnut setting
8. Heavy duty jack and two jack stands or car ramps
9. Automotive grease
10. Hack saw or Dremel tool
11. T25 Torx screwdriver or socket

Preparing Vertical Side Panels for the Panzer Plate

1. First, on level ground, raise the front of the car evenly. To do this, you may choose to drive the car onto ramps, jack the car up and secure with two jack stands or use a car lift. If using jack stands or ramps be sure to **chock the rear wheels and place the car in gear and firmly apply the handbrake**. You should also **wear safety goggles** during this entire procedure.

2. Once the car is safely raised, remove the Original Equipment Audi plastic belly pan if your car still has one. Next, on the driver side, remove the rear T25 Torx screw from the tail end of the plastic vertical engine bay side panel like this (FIGURE 9 - REMOVING THE REAR T25 TORX SCREW).

Figure 9 - Removing the Rear T25 Torx Screw

The picture also shows a yellow line where the side panel must be cut for use with the skid plate. Tin snips, tree limb clippers, a Dremel Tool, or a hack saw will work for this task (FIGURE 10 - USING HACK SAW TO CUT THE SIDE Panel).

Figure 10 - Using Hack Saw to Cut the Side Panel

In order for the Panzer skid plate to fit, the mounting spot on the subframe where the side panel attaches must not have a Torx screw or side panel attached to it. Retain the T25 Torx screws for the final skid plate install.

3. The driver side vertical side panel will also need to have the forward part removed to enable the mounting of the skid plate (FIGURE 11 – REMOVING FORWARD SECTION OF SIDE PANEL).

Figure 11 – Removing Forward Section of Side Panel

A hack saw or Dremel tool (FIGURE 12 – USING DREMEL TOOL TO CUT SIDE PANEL) with a cutoff wheel is quite effective at cutting through this fiberglass reinforced material (FIGURE 13 – FORWARD SECTION OF SIDE PANEL).

Figure 12 – Using Dremel Tool to Cut Side Panel

Figure 13 – Forward Section of Side Panel

You should not have to remove the side panel to perform this operation but its fine if you do.

4. The original plastic Audi TT passenger side vertical panel does not fit perfectly with the Panzer Plate.There is a 1/2 inch gap between the Panzer Plate and the OE TT side panel. If you would like to run a splash panel on the engine side of the engine bay, you will need to purchase an OE VW plastic side panel with part number 1J0 825 250AC (only available at Volkswagen dealers for approximately $30). They can be trimmed with a utility knife to fit around the factory intercooler ductwork. Remove the original Audi panel by first removing the two 10mm sheetmetal nuts which are against the frame rails (FIGURE 14 – LOCATION OF THE SHEETMETAL NUT and FIGURE 15 – MOVING THE SHEETMETAL NUT).

Figure 14 – Location of the Sheetmetal Nut

Figure 15 – Removing the Sheetmetal Nut

On 180hp models it will be easier to access the rear 10mm nut once the intercooler duct is loosened (FIGURE 16 - ACCESS THE REAR 10MM NUT).

Figure 16 - Access the Rear 10mm Nut

This is accomplished by removing the rear 10mm nut like this (FIGURE 17 - REMOVING THE REAR 10MM NUT).

Figure 17 - Removing the Rear 10mm Nut

Replacement of the side panel simply requires you to put the star washers (FIGURE 18 – INSTALLING STAR WASHERS) of the new side panel on the threaded stud mounts and push up on them (FIGURE 19 - STAR WASHERS OF THE NEW SIDE PANEL ON THE THREADED STUD MOUNTS).

Figure 18 – Installing Star Washers

Figure 19 - Star Washers of the New Side Panel on the Threaded Stud Mounts

The star washers equipped with the new panel replace the 10mm sheetmetal style nuts. (You may elect to reuse your 10mm sheetmetal nuts if you like.) After the new side panel is installed, be sure to replace the nut for the intercooler duct if you have a TT 180.

Installing the Front Skid Plate Mounts

The Audi TT Panzer Plate uses two stainless steel exhaust clamps to hold the front part of the plate to the beefy steel intercooler tube. This is the large diameter tube that crosses the front of the car from left to right in the lower engine bay. The stainless exhaust clamps fit the diameter of the intercooler tube perfectly. The passenger side exhaust clamp is used *alone* without any other bracketry. The driver side mount uses the same stainless exhaust clamp as the passenger side but the driver side clamp is attached to the custom aluminum bracket (FIGURE 20 - CUSTOM ALUMINUM BRACKET).

Figure 20 - Custom Aluminum Bracket

This aluminum bracket fits the skid plate curvature and will help the skid plate absorb shock from hitting items in the roadway. The Panzer skid plate attaches to this secondary aluminum bracket.

1. One of the supplied stainless steel exhaust clamps will mount near the end of the passenger side of the intercooler tube (just next to the rubber intercooler hose connection on TT 225). To install this clamp, slip the exhaust clamp u-bolt over the steel intercooler tube and let the threaded stud ends point toward the ground (FIGURE 21 - EXHAUST CLAMP U-BOLT OVER THE STEEL INTERCOOLER TUBE).

Figure 21 - Exhaust Clamp U-Bolt over the Steel Intercooler Tube

Next, slip the open side of the sheetmetal part of the clamp onto the u-bolt studs. Next, take one of the 3/8 inch stud retainer discs (FIGURE 4 - STUD RETAINER DISCS) from the ziploc hardware kit and put it on one of the threaded studs (FIGURE 22 – RETAINER DISC ON THE THREADED STUD).

Figure 22 – Retainer Disc on the Threaded Stud

Push the disc all of the way up the stud against the sheetmetal piece. Repeat for the second stud. It might be helpful to push the retainers on the studs with your 9/16 deep socket. These retainers will keep the clamp in place while you are mounting the skid plate for the first time and for any time thereafter. To finish this step, place the passenger side exhaust clamp nuts within reach of this mount to prepare for mounting the skid plate.

2. On the driver side, the custom aluminum bracket (FIGURE 23 - CUSTOM ALUMINUM BRACKET)

Figure 23 - Custom Aluminum Bracket

attaches to the intercooler tube with the remaining exhaust clamp. This mount also attaches near the end of the intercooler tube but as with the passenger mount, the final position will be found when you mount the skid plate.

3. Place the driver side exhaust clamp u-bolt over the intercooler tube. With one hand, place the open side of the sheetmetal part of the exhaust mount up onto the u-bolt studs and then up

against the intercooler tube (FIGURE 24 - SHEETMETAL PART OF THE EXHAUST MOUNT UP AGAINST THE INTERCOOLER TUBE.).

Figure 24 - Sheetmetal Part Of The Exhaust Mount Up Against The Intercooler Tube.

With the other hand, engage the u-bolt studs with the aluminum mounting bracket (FIGURE 25 - ENGAGE THE U-BOLT STUDS WITH THE ALUMINUM MOUNTING BRACKET) and then push the bracket up against the bottom of the exhaust clamp.

Figure 25 - Engage the U-Bolt Studs with the Aluminum Mounting Bracket

Orient the mount with the thin end forward and even with the radiator support (FIGURE 26 - THIN END FORWARD AND EVEN WITH THE RADIATOR SUPPORT.).

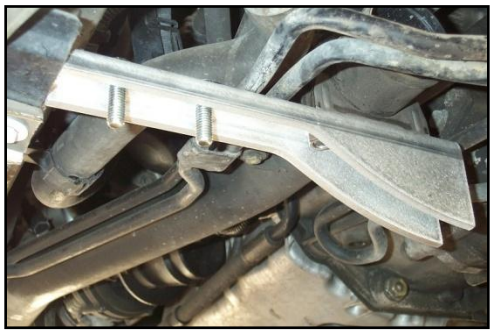

Figure 26 - Thin End Forward and Even With the Radiator Support.

Hold the assembly together with one hand. Next, hand thread one of the nuts onto one of the u-bolt studs. The 9/16 socket might be helpful to do this. Repeat this step for the other stud. Once both nuts are threaded, evenly tighten the nuts with your fingers but only to the point of the mount being barely snug and still loose enough to slide left or right. This will allow you to position the mount during the first install. The mount should be toward the outside of the body-colored painted tab which holds the front bumper skin to the radiator support (FIGURE 27 - MOUNT TOWARD THE OUTSIDE OF THE BODY-COLORED PAINTED TAB).

Figure 27 - Mount toward the Outside of the Body-Colored Painted Tab

Once this mount is attached to the intercooler tube, remove both of the black lock nuts from the two forward bolts and set them within reach near the front of the car.

Prepare to Mount the Plate

All year model 2000 and 2001 cars came equipped with flat steel stress bars from the factory. Audi deleted these bars from 2002 and later (newer) cars. If you have a 2002 or newer car without the stress bar you will be installing three rear rivnut anchors in the subframe whereas if you have an "Earlier" car which was produced before 2002 you will only be installing one rivnut since your car already has the two outside rivnuts installed at the factory.

1. First, remove the flattened black steel Original Equipment stress bar from the bottom of the subframe with a 16mm wrench or socket (FIGURE 28 - REMOVING THE FLATTENED BLACK STEEL ORIGINAL EQUIPMENT STRESS BAR).

Figure 28 - Removing the Flattened Black Steel Original Equipment Stress Bar

Set both of the removed stress bar bolts near the place where they were attached to the subframe. You will use these bolts to mount the skid plate since the skid plate attaches to the stress bar rivnut anchors. In the very unlikely event that your car has lost its stress bar and bolts, any major hardware store should have zinc plated 10mm bolts. (10mm x 1.50 thread and 40-50mm long or Audi part number N 104 679 01)

2. The supplied ziploc bag hardware kit contains the rear center rivnut anchor for the Panzer skid plate. The large washer in the hardware bag must be used as a spacer between the skid plate and rear center rivnut mount (FIGURE 29 - LARGE WASHER USED AS A SPACER).

Figure 29 - Large Washer Used As a Spacer

The bag also contains a greenish colored factory Audi 10mm stress bar bolt just like the other two stress bar bolts removed in Step 1. Please thoroughly grease the threads of this new bolt with wheel bearing grease to aid in setting the supplied rear center rivnut. Set this greased bolt and the spacer washer in an easy to reach place near the other two matching bolts.

3. Insert (FIGURE 30 – INSERTING THE RIVNUT) the rivnut (FIGURE 8 - GOLD OR BRONZE COLORED RIVNUT) into the center 13mm hole which is pre-drilled in the subframe (FIGURE 31 - CENTER 13MM HOLE PRE-DRILLED IN THE SUBFRAME).

Figure 30 – Inserting the Rivnut

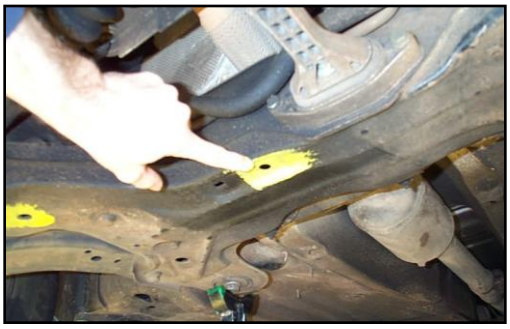

Figure 31 - Center 13mm Hole Pre-Drilled In the Subframe

The rivnut *should* stay in the hole well enough not to drop out (FIGURE 32 - RIVNUT STAYING IN THE HOLE). Use a small piece of duct tape to fix it in place if it will not stay in place on its own (FIGURE 33 - USE A SMALL PIECE OF DUCT TAPE TO FIX RIVNUT IN PLACE).

Figure 32 - Rivnut Staying In the Hole

Figure 33 - Use a Small Piece of Duct Tape to Fix Rivnut in Place

4. Next, with the WWW.DIESELGEEK.COM...MK4 PANZER PLATE stamped side of the skid plate at the front and facing the ground, raise the skid plate to the underside of the engine bay and line up the rear of the plate to the two outer rear rivnut anchors. Once these holes are lined up, insert one of the stock stress bar bolts through the skid plate and thread it into the black rivnut anchor by a few turns. Repeat this task for the other rear corner.

5. While still holding the front of the skid plate, push up gently on the passenger front corner to see how far you will have to move the passenger clamp mount get it to line up with the two 1/2 inch skid plate holes (FIGURE 34 – LINE UP THE ½ INCH SKID PLATE HOLES).

Figure 34 – Line Up the ½ Inch Skid Plate Holes

Once the passenger mount is lined up properly, the threaded studs will poke through the holes in the skid plate and you can then *loosely thread* both of the nuts onto the threaded studs.

6. Repeat this process for the driver side mount. The studs for the driver side mount will protrude through the skid plate when the mount is properly lined up. Move the mount in whatever direction necessary to get it to line up with the holes in the skid plate. When lined up, thread the black shoulder nuts onto the studs and tighten them to 30 lb. /ft. or pretty tight.

7. At the rear of the plate, slip the supplied thick fender washer between the skid plate and the center rivnut. Insert the new pre-greased bolt through the skid plate and hand thread it completely into the center rivnut. You may have to push up on the skid plate to keep the rivnut from spinning while you are tightening the bolt.

8. Next, tighten the two outer rear bolts to 35 lb. /ft. and then tighten the new middle rear bolt to the same torque value. This will mushroom out the new center rivnut on the inside of the subframe, permanently locking it into place. (The bolt is always removable, however.)

9. Finish tightening the nuts for both of the front exhaust clamps to 30 lb. /ft. or pretty tight. There are two oblong holes in the skid plate on the driver side which give you access to the driver side u bolt nuts (FIGURE 35 - TWO OBLONG HOLES IN THE SKID PLATE).

Figure 35 - Two Oblong Holes in the Skid Plate

These holes also have a secondary function of allowing cooling air into the lower engine bay.

10. Attach the vertical engine bay side panels to the skid plate with two leftover T25 Torx screws through the 1/4 inch holes on either side of the skid plate (FIGURE 36 - ATTACH THE VERTICAL ENGINE BAY SIDE PANELS).

Figure 36 - Attach the Vertical Engine Bay Side Panels

You are done!

Customer Feedback

Please feel free to email me at jim@dieselgeek.com with pictures or suggestions to make these instructions clearer.